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Minnesota Archaeology License
25-181



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The Vollbrecht Dam Site (21-WR-244, 21-HE-590) in the Crow River in Hanover, Minnesota



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Acknowledgments

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Underwater Archaeologist
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Volunteer Diver
Mark Slick



Volunteer Diver
Kelly Nehowig

Volunteer Diver
Josh Knutson

Mascots & Competing Cats



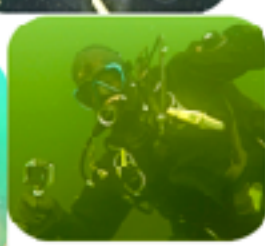
Freddie
Mercury Cat
&
Rodney
McKay Cat



Volunteer Diver
Greg Flanagan



Volunteer Diver
Ed Nelson



Trustee
Deb Handschin



Volunteer Dive Crew
Ann Nehowig



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Chair
Mike Kramer



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AND PRESERVATION OF MINNESOTA'S FINITE MARITIME CULTURAL RESOURCES

“A small St. Paul-based nonprofit, Maritime Heritage Minnesota (MHM), re-establish[ed] the discipline of underwater archaeology in Minnesota....MHM...conducts groundbreaking nautical archeological and maritime historical research.”

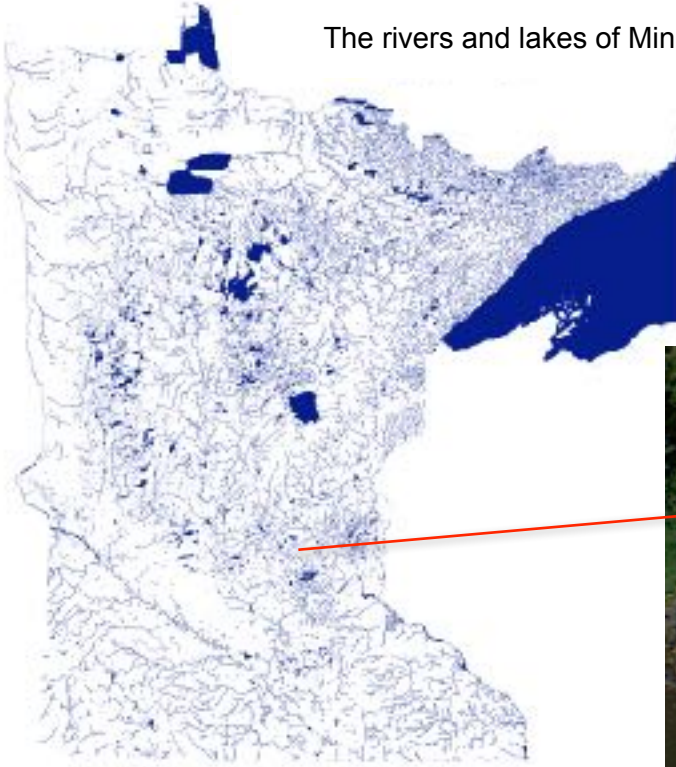
~Steve Elliott, Former Minnesota Historical Society CEO and Director, January 2015

Introduction

Underwater archaeological sites, wrecks, maritime terrestrial sites, and the artifacts associated with them tell a story. Removing or otherwise disturbing artifacts and their contexts, treating them as commodities that can be sold, obliterates that story. Underwater archaeological and maritime sites are finite, and are significant submerged cultural resources. Nautical, maritime, underwater, maritime terrestrial – Maritime Heritage Minnesota's (MHM) deals with all of these types of sites throughout the State of Minnesota. MHM's Mission is to document, conserve, preserve, and when necessary, excavate these finite cultural resources where the welfare of the artifact is paramount. MHM is concerned with protecting our underwater and maritime sites – our shared Maritime History – for their own benefit in order for all Minnesotans to gain the knowledge that can be obtained through their study. MHM's study of wrecks does not include the removal of artifacts or site damage. MHM does not raise wrecks or 'hunt' for 'treasure'. Submerged archaeological sites in Minnesota are subject to the same State statutes as terrestrial sites: the Minnesota Field Archaeology Act (1963), Minnesota Historic Sites Act (1965), the Minnesota Historic District Act (1971), and the Minnesota Private Cemeteries Act (1976) if human remains are associated with a submerged site. Further, the case of *State v. Bollenbach* (1954) and the Federal Abandoned Shipwrecks Act of 1987 provide additional jurisdictional considerations when determining State oversight and "ownership" of resources defined by law as archaeological sites (Marken, Ollendorf, Nunnally, and Anfinson 1997, 3-4). Therefore, just like terrestrial archaeologists working for the State, universities, or with contract firms, underwater archaeologists are required to have the necessary education, appropriate credentials, and hold valid licenses from the Office of the State Archaeologist (OSA).

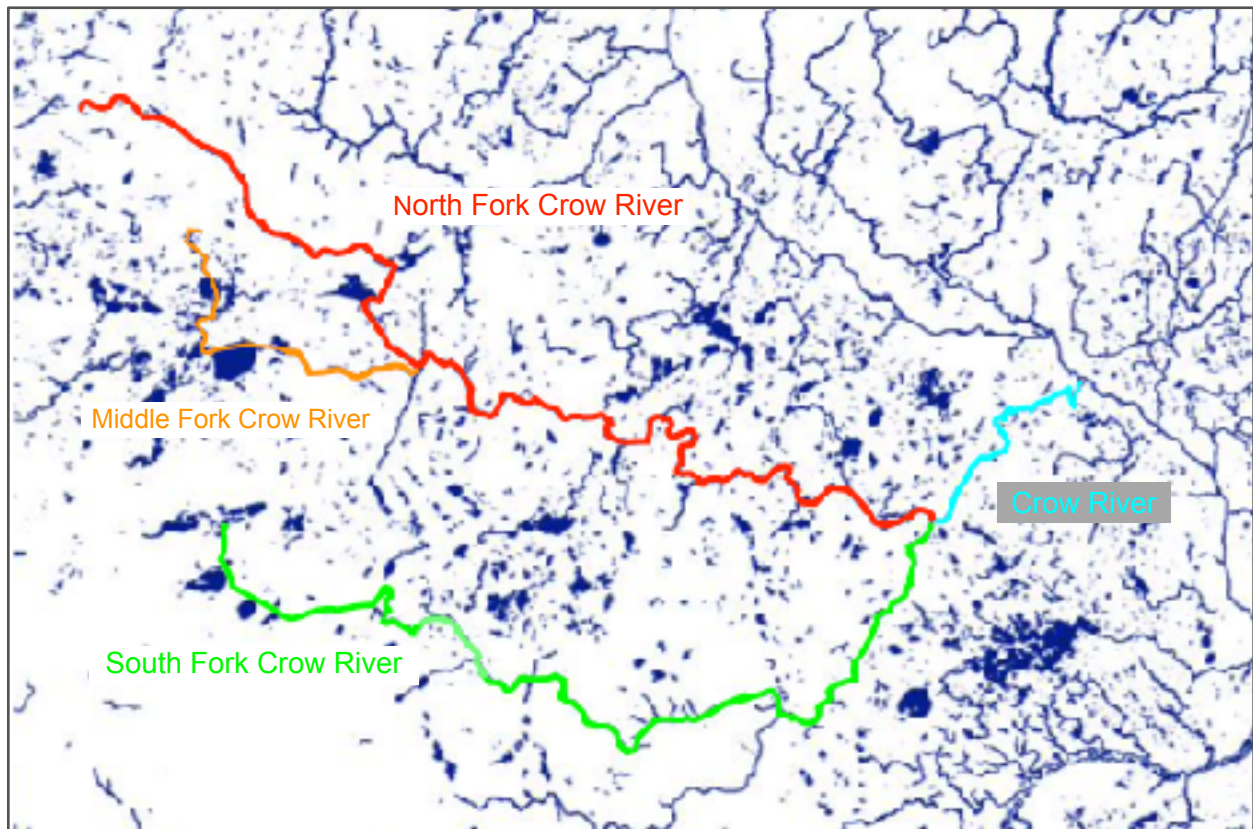
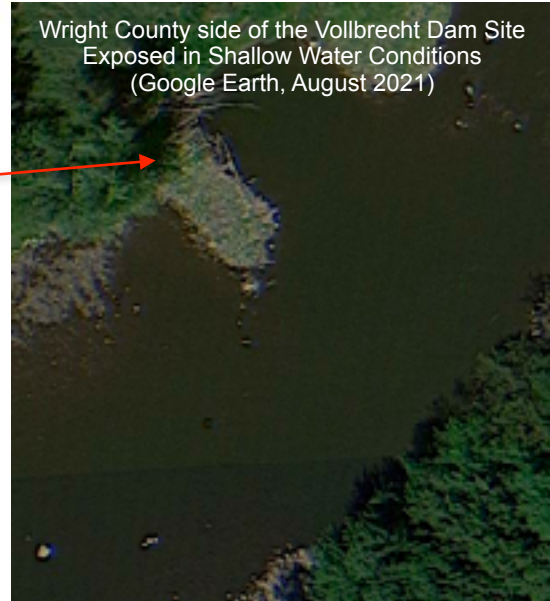
MHM conducts sonar surveys in our State's rivers and lakes in order to produce images of possible submerged cultural resources and to determine their location coordinates. Additionally, often the basic identification of a site can be determined if the sonar data has sufficient clarity to determine the basic identification of a site. In the case of the Vollbrecht Dam Site in the Crow River in Hanover, Minnesota, MHM conducted a targeted sonar survey of the area during high water conditions in June 2025. Without the deeper water at that time, creating sonar recordings and images of the dam site would not have been possible due to the generally shallow nature of the river at the site and the prevalence of large stones on and around the dam itself. With the deeper water came significantly swift river flow and current, making SCUBA reconnaissance on the site too dangerous in mid-summer. By November when the only fast current that remained on the site was at a break in the dam at the center of the channel, allowing for site documentation on both sides of the river.

The rivers and lakes of Minnesota.



Pioneer Press Water Map

Wright County side of the Vollbrecht Dam Site
Exposed in Shallow Water Conditions
(Google Earth, August 2021)



Methodology

The Phase I Maritime Terrestrial and Underwater Archaeological Assessment of the Old Hanover Dam began on June 12, 2025, and concluded on November 14, 2025. The purpose of the project was to record sonar footage of the area and document the site using video, measured drawings, triangulation, and possibly 3D scanning and photogrammetry. Due to low water levels in November, MHM completed the fieldwork portion of the project on snorkel, with no SCUBA use required. With appropriate data collected during the fieldwork, MHM then conducted historical research about the dam's context and its builders.

Results of the Phase I Maritime Terrestrial and Underwater Archaeological Assessment of the Old Hanover Dam Now Known as the Vollbrecht Dam Site Minnesota Archaeology License 25-181

Historical Background

Vollbrecht Mills

The Vollbrecht Dam was designed and constructed by brothers William Vollbrecht and Jacob Vollbrecht in the Crow River, Minnesota Territory. The Vollbrecht Brothers were born in and lived near the Prussian city of Hanover in Germany. William emigrated from Prussia, in 1851 on the ship *Peter Godeffrey*. Jacob followed him in 1854 on the SS *Roland*; both brothers left Germany from the port of Bremen, and entered the United States through the Port of New Orleans. Jacob arrived in Minnesota in October 1855 and William arrived in the territory in April 1856. That same year, Minnesota was surveyed, and Township 119 North/Range 24 West/Section 35 was developed on the north side of the Crow River - the location of the Vollbrecht Dam Site in Frankfort Township. Early on, Jacob was known to have



The blue box marks the general location of the Vollbrecht Dam Site on the original plat map of Frankfort Township in Wright County, Minnesota (Norris et al. 1856).



William Vollbrecht and Jacob Vollbrecht's gravestone in Hanover, Minnesota (Hanover Historical Society, courtesy of Mary Coons; findagrave.com).

constructed a log cabin on the Crow River upriver from current Hanover, and William set up a blacksmithing business. Using Jacob's skill as a woodworker and millwright, and William's knowledge as an ironworker and mechanic (noted as "Mechaniker" on his daughter's birth register), the brothers began construction of the dam and the flour mill it would serve in May 1856; the structures were completed in December. Unfortunately, an early winter melt brought high water and strong currents; the dam broke on February 8, 1857, washing the mill and another building into the river and downstream (Balch Institute for Ethnic Studies 1851, 1854; Coons 2022, 10-11; Curtiss-Wedge 1915b, 724; Wright County, Minnesota 1872).

The brothers had invested a large amount of their monetary holdings in the dam and mill in the village they founded that became known as Vollbrecht Mills.¹ To re-establish their financial footing and develop a plan to construct another mill, for about two years they used their considerable talents in metal working (blacksmithing) and construction to build homes for settlers moving to Vollbrecht Mills. William and Jacob also farmed their land to support their efforts. Prior to 1860, the Vollbrechts managed to construct another

¹The first mention of "Vollbrecht Mills" that MHM located was February 24, 1875, although the village was known by that name much earlier than that date (*Minneapolis Daily Tribune* 1875a).

dam and a new mill. This dam also broke and the mill was taken by the Crow River. A third mill was constructed in a marshy area north of the river where Jacob had purchased a tract of land; William acquired land just south of his brother's holdings, where the Vollbrecht Dam Site is located. Water levels at the third mill site was not consistent and it was not a viable enterprise - the brothers sold the land. In 1867, William and Jacob installed a third and final dam downstream from the Vollbrecht Dam Site, and constructed their fourth mill. This mill processed timber, flour, and feed. Into the 1870s, the "Vollbrecht Wm. and Bro. Lumber and Flour Mill" was the only commercial venture in the St. Michael post office area of Wright County. Their dam was the source of power for their mills and in 1881 it was reported to have a head of seven feet. This venture was highly profitable and remained so until the mills burned in 1882. The Vollbrechts re-built their business and further generations of the family continued to produce lumber, flour, and feed. Jacob stepped back from the business in 1885, and William passed away in 1889. After working on the successful incorporation of Hanover as a Minnesota town in 1891, Jacob passed away in 1894. In 1906 the Hanover Roller Mill - recognized as the best roller mill in Wright County - burned down one last time, and was again re-built and operated until 1927 (Bureau of Land Management 1860; Coons 2022, 24, 32, 37, 148; Curtiss-Wedge 1915a, 19, 1915b, 724-725; McKillop & Sprague 1878, 18; *Minneapolis Journal* 1906; *Minneapolis Tribune* 1878; Warner 1879; Wright County, Minnesota 1889).



Hanover Roller Mills with the feed mill on the river bank with its waterwheel house. The historic 1885 Pratt through truss bridge featured prominently (Hanover Historical Society, courtesy of Mary Coons).

Building Bridges

Beyond constructing their own dams and mills, and homes for their neighbors, the Vollbrecht brothers determined that they could use their combined technical abilities to increase the infrastructure available for their company's use. In a wider context, however, their expertise in metal and wood working greatly benefited their community and the wider region as a whole beginning in the early 1870s. Specifically, William and Jacob offered to construct a bridge across the Crow River at Vollbrecht Mills for only \$1,000.00 when the Hennepin County Board of Commissioners (HCBC) figured the

project would cost an estimated \$3,200.00. The Vollbrecht 'bid' was accepted by the HCBC with the stipulation that they would provide \$600.00 for the project if Wright County would promise the remaining \$400.00. By early March 1874, the HCBC reported that the Hennepin County Committee on Roads and Bridges (HCCRB) was directed to inspect the Vollbrecht-built bridge at Vollbrecht's Mill² with the intention of paying William and Jacob the remaining \$600.00 owed to them upon satisfactory completion of their county contract. Apparently this money was paid to Jacob in April 1875 (*Minneapolis Tribune* 1873, 1874, 1875b).

A testament to the quality of the Vollbrecht Brothers skill and knowledge in bridge engineering and construction was incorporated into a proposal by the HCBC for a new bridge to be built across the Crow River between Hassan and Frankfort Townships. The new bridge would facilitate the relocation of the Minneapolis to Monticello Road crossing over the Crow River. The HCBC determined the firm they hired would produce a "Bridge and Piers to be constructed on the same plan and of the same quality of material as the bridge at Vollbrecht Mills, only two feet wider". Using William's and Jacob's bridge design and their craftsmanship for the bridge near their home as the template for the new structure is strong evidence for the HCBC's trust in their work. And, unsurprisingly, the Vollbrechts were awarded the Hassan Bridge contract (Larsen 1966, 307; *Minneapolis Daily Tribune* 1875a).

By the end of 1875, the Town Supervisors of the Town of Rockford (TSTR) and the HCCRB put out a call for construction proposals that appeared in newspapers for a new bridge over the Crow River in Rockford, upriver from Vollbrecht Mills. This reference is particularly helpful for maritime history because it is specific in its description of the area - and because of its full endorsement for the work of the Vollbrecht Brothers:

The length of the bridge will be about three hundred and twenty-five feet, the piers to consist of 13 piles of white oak driven 8 feet in the ground, and about 14 feet high above the river. The ice protection piers to be the same as those above the Vollbrecht bridge, and the bridge to be 50 feet spans and 16 feet in width, and on the same plan and specifications as the Hassan and Frankfort bridges, and to be built in a thorough and workmanlike manner....(*Minneapolis Daily Tribune* 1875b)

Again, the serious trust put into the Vollbrecht Brothers' ability to produce dependable and safe infrastructure for both Wright and Hennepin Counties - and the people of Rockford - is tangible in this proposal description based on their previous bridge construction projects. It was reported that the Rockford Bridge contract went to the Vollbrecht Brothers for a bid of \$1,900.00. The HCBC inspected the Rockford construction site and assured the HCC that the bridge will be hurried forward to completion as speedily as possible" in early January 1876. Funds were paid to the brothers for the Hassan and Rockford Bridges in 1876 and 1877, in the sums of \$872.50, \$950.00, and \$1,058.05. Additionally, the Vollbrechts were paid \$108.35 by the HCBC "for extra work done on the Volbright [sic] bridge across Crow River" for materials and labor in April 1876. Within the next 6 years, Hennepin and Wright Counties required r maintenance and repairs to the Crow River bridges. The Vollbrechts were called upon

²Vollbrecht Mills is variably referred to as Vollbrecht's Mill, Volbrecht's Mill, Vollbrecht's Mills, and Volbrecht's Mills. The Vollbrecht Brothers are referred to as Volbrecht Brothers, Volbreht Brothers, and Volbright Brothers.

for these repairs, bringing in more income for their thriving business. Jacob and William took it upon themselves to furnish "plank...to cover the bridge across Crow river, near Vollbright's [sic] mills, Wright county, having paid a like amount for that purpose" (*Daily Evening Tribune* 1880; *Minneapolis Daily Tribune* 1875b; *Minneapolis Evening Journal* 1880, 1882; *Minneapolis Journal* 1883; *Minneapolis Tribune* 1875c, 1876a-b, 1877; *The Tribune* 1880).

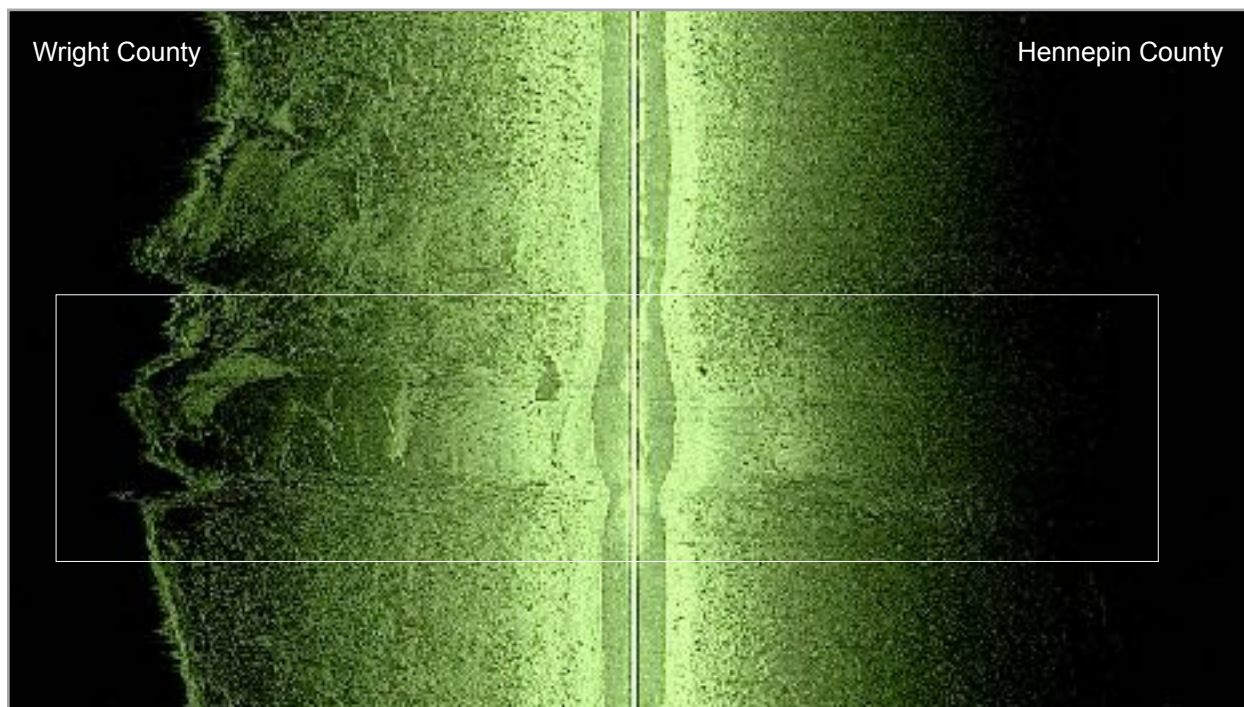


William and Jacob Vollbrecht's personal and business land holdings in unincorporated Hanover by 1879. Note their Hanover Mills (feed and flour) and their Saw Mill. Most importantly, the river crossing shown here is the Vollbrecht Mills bridge designed and constructed by the Vollbrecht Brothers. This simple depiction is the only image of the bridge that MHM could locate (Warner & Foote 1879).

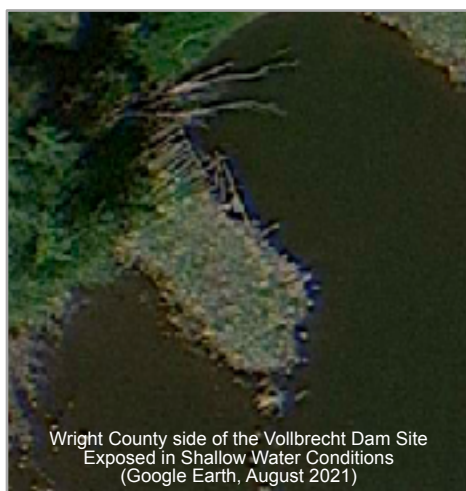
Vollbrecht Dam Site Description (21-WR-244, 21-HE-590)

The Vollbrecht Dam Site is located in the Crow River upriver from the town of Hanover, Minnesota, in both Wright and Hennepin Counties. During high water conditions the site is completely submerged and MHM recorded sonar of the area in June 2025 when the channel was 9.5 feet deep after late spring and early summer rains. During high water the river's current is strong and the sonar survey of the site area was difficult - and made diving entirely too dangerous to conduct at that time. Low water conditions in early and mid-November allowed MHM to investigate the dam site without SCUBA, but utilizing wet and dry suits with masks and snorkels when needed. The dam survives on the Wright County side of the river and extends beyond the center of the channel where a break in the structure indicates where it failed. At this point, the site is in Hennepin County. The Vollbrecht Dam Site is 96.33 feet wide on its northern edge, 175.36 long on its eastern border, 84.18 feet wide on its southern border, and 168.15 feet long on its western border. Even during low water conditions as those experienced by mid-November 2025, the most intact part of the dam on the north side of the river is performing its designed function - pooling water on that side of the river. The site is a

vernacular design timber dam that was constructed taking advantage of materials at hand - timber, stones, and gravel. Specifically, it is a timber dam of crib design where the 'longitudinal' timbers support a 'deck' of closely placed 'transverse' timbers enclosed by 'railings' of timbers slotted together and embedded into the riverbanks. For clarity, MHM has labeled timbers that are aligned with the river flow as transverse and those that run across the river as longitudinal.



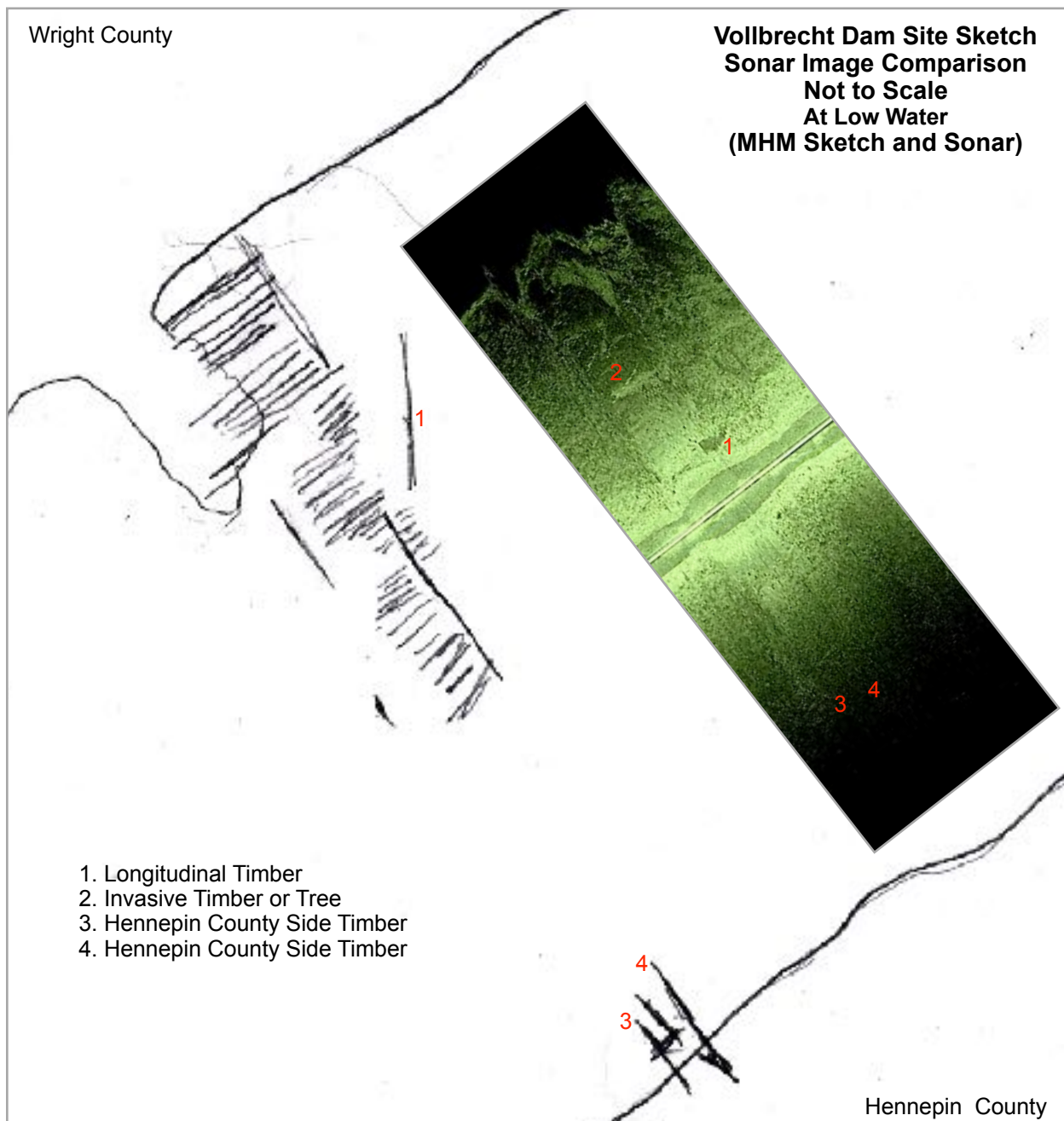
MHM recorded sonar of the Vollbrecht Dam Site in June 2025 during high water conditions. Strong current was an issue but useful images were obtained. It must also be noted that boat speed, current, and exact direction affect the images, but imbedded meta data clarifies the exact location of dam components. The dam is the rectangular-shaped anomaly in the white box (MHM Sonar).



MHM counted more than 130 timbers aligned upstream/downstream. They were above or at the surface of the water, just below the surface and could be seen, embedded in gravel at or near the surface, or completely submerged and seen while filming underwater.³ The site components on the south side of the river in Hennepin County are less numerous. But, the timbers protruding from the riverbank are thicker and sturdier than those on the Wright County side. Much of the northern uppermost section of the dam was exposed during low water, far into the channel, where the site was dry near both banks. It remained under fast running water

³The numbers of visible timbers at or above the water line, along with any components among stone and gravel, changes constantly. MHM's field work from November 2025 was conducted during low water conditions. Extreme low water conditions would show dozens of additional timbers above or at the water surface. Therefore, the site plan produced for this project is specific to November 7, 13, and 14, 2025.

from an inch up to 4.5 feet. MHM identified one vertical timber, near the failed section of the dam, that is basically a piling that anchored and wedged the horizontal wood and stone components to the riverbed. So, every other level of the structure has timbers going in alternating directions. It must be noted that the Vollbrecht Dam was not constructed with abutments, but it may have had earthen embankments at one or both shorelines for stability. However, there is no archaeological evidence for this supposition, and there are no 'borrow pits'⁴ evident on either riverbank. On the Hennepin County side of the site, two layers (2 and 3 below) of three substantial longitudinal timbers protrude from the bank that under normal and high water conditions are underwater. These timbers are both aligned above each other and staggered, a



⁴A borrow pit is the term used throughout the 2013 dam study to describe pits where dirt was removed to form earthen dams.

design element that would increase the strength of the dam. Another large longitudinal timber whose visible end is eroded by water action is located under and offset to the larger ones above it. This component remained mostly underwater in low water conditions. One visible transverse timber survives partially underwater during low water conditions on the south side; there may be more of these timbers imbedded into the river bottom.

At the time of documentation, the visible and sometimes exposed top or 'head' of the dam on the Wright County side is comprised of a mixture of timbers, various sizes of stones, gravel, and sand. Two longitudinal timbers are clearly visible on the current head of the dam near the middle of the river channel, and another is dislodged from the dam on one end and it is angled down river. This part of the dam creates rapids as water rushes over it and toward the failed section of the structure, greatly increasing the current even in low water conditions. Various aerial images of the site show it in different stages of water flow and in every depiction, the dam affects the current which can be seen on the surface. At the point where the river water is still successfully pooled by the dam at the Wright County shoreline, MHM counted at least 12 transverse timber layers that could not be seen on video. Longitudinal timbers could not be counted because they have eroded away, leaving the transverse timbers undercut and suspended in the water column at great lengths. Therefore, MHM could not see surviving longitudinal timbers in the intact portion of the dam on the Wright County side or record them on video, but they must be there because the structure is stable and intact at that point. However, one sturdy and long longitudinal timber embedded in the north riverbank, indicates the dam was much wider when originally constructed. Additionally, the current lengths of the transverse timbers suspended in the water column, also point to a wider dam when built. Lastly, MHM cannot determine how high the dam was at the time of its fabrication.



This image was taken from the Wright County side of the Vollbrecht Dam Site (21-WR-244, 21-HE-590). The fallen tree on the bank extends into the river and is part of riverbanks stabilization. The river on the other side of this tree is the deepest water MHM experienced - the pool created by the dam itself. The head of the dam is under 1" to 3" of water near the middle of the river channel - seen here where the transverse timbers 'end'. This part of the dam is the source of rapids and water moves quickly over this area, even during low water conditions (all site fieldwork images by MHM).

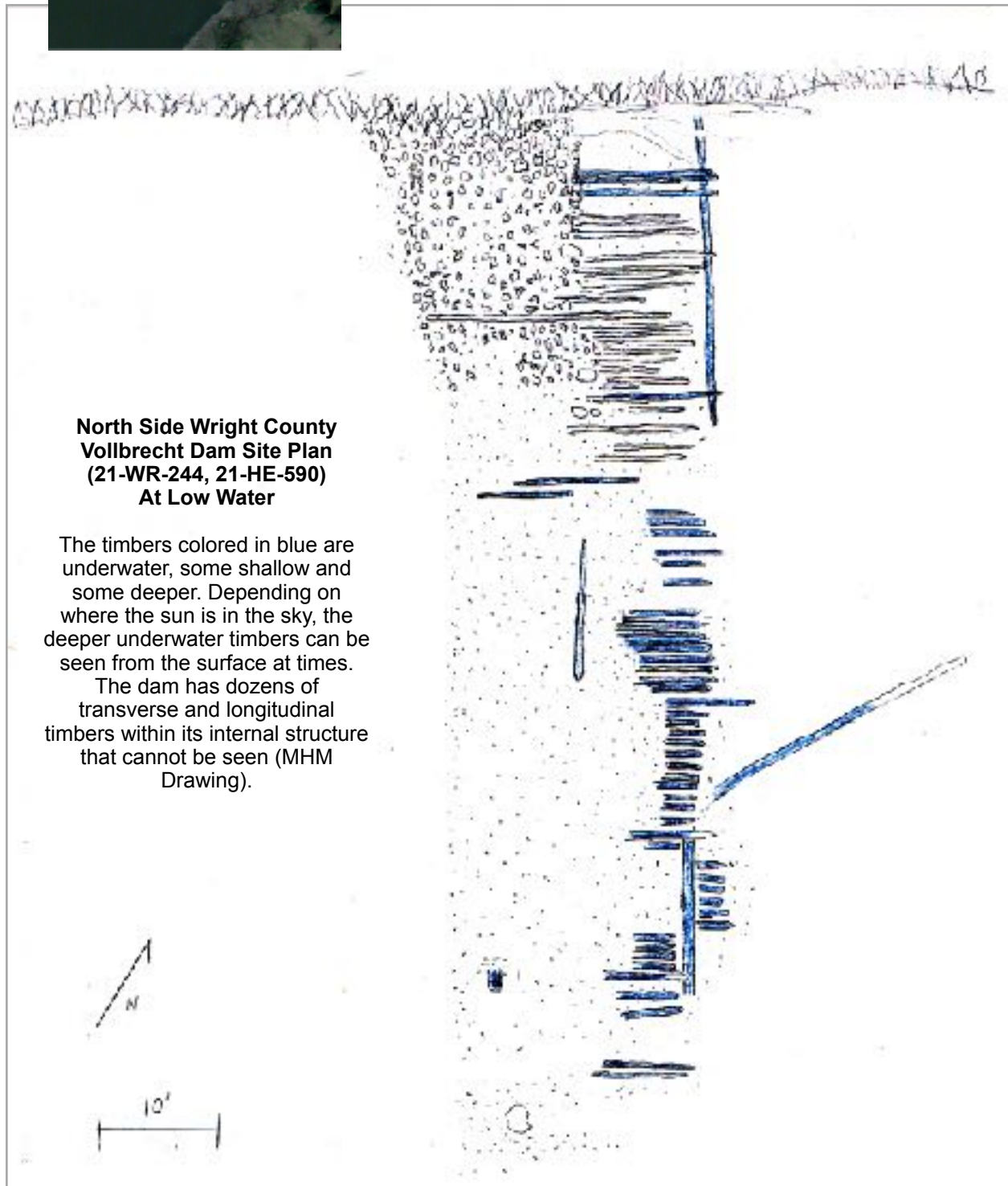


The Vollbrecht Dam Site acts as a rapids and affects the water column even during normal and high water conditions (Google Earth).

**North Side Wright County
Vollbrecht Dam Site Plan
(21-WR-244, 21-HE-590)
At Low Water**

The timbers colored in blue are underwater, some shallow and some deeper. Depending on where the sun is in the sky, the deeper underwater timbers can be seen from the surface at times.

The dam has dozens of transverse and longitudinal timbers within its internal structure that cannot be seen (MHM Drawing).



Transverse timbers underwater
and extended above the river.



Transverse timbers extended
above the river.



Longitudinal timber over
transverse timbers that lie on the
river bottom.



Transverse timbers on the river bottom.

Transverse timber over a longitudinal timber on the river bottom.



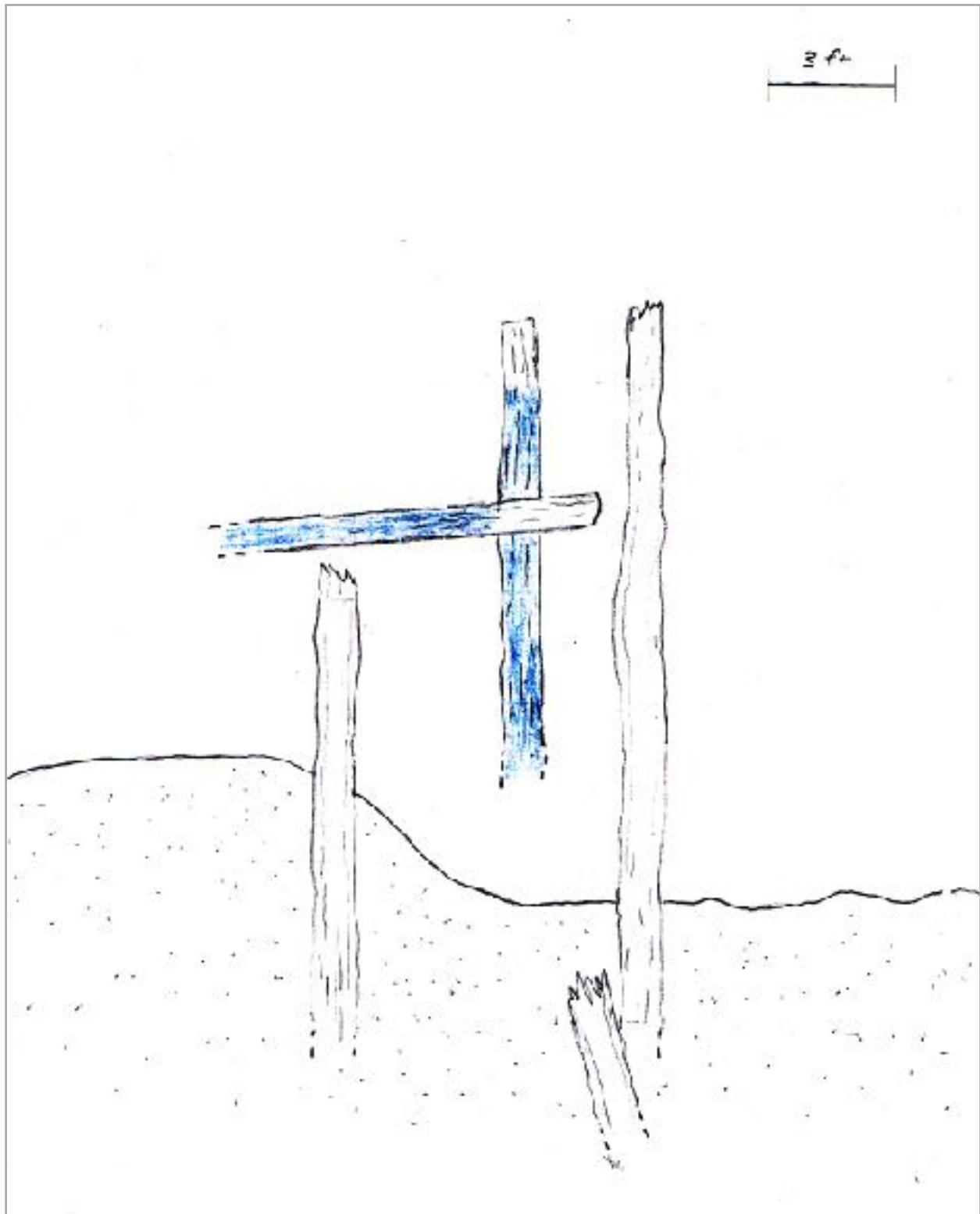
The Wright County side of the Vollbrecht Dam Site during low water.



Different layers of transverse timbers extending in the downriver water column.







**South Side Hennepin County Vollbrecht Dam Site Plan
(21-WR-244, 21-HE-590)
At Low Water**

The timbers colored in blue are both underwater and above the river surface (MHM Drawing).

These images were taken from the Hennepin
County side of the Vollbrecht Dam Site
(21-WR-244, 21-HE-590).





Vollbrecht Dam Site Analysis (21-WR-244, 21-HE-590)

A project designed to “create an inventory of known historic dams, to develop a contextual framework for evaluating and interpreting the historical significance of these properties, and to suggest strategies for their documentation...intended to facilitate cultural resource management activities” was completed for the Oversight Board of the Statewide Survey of Historical and Archaeological Sites of Minnesota’s Historical and Archaeological Sites by Archaeo-Physics, LLC, in 2013. This study's research strategy combined state, federal, and 'civilian' databases accompanied by literature reviews and Light Detection and Ranging (LiDAR) images to locate possible dam sites. Further, those research endeavors were used during fieldwork to document and conduct laser scanning of chosen dams and sites within their contexts. This project produced a database of historic dams and sites along with suggested evaluation criteria for their condition and attribute determination. The team surveyed 31 sites in 12 counties, including Hennepin and Wright (Arnott et al. 2013, i).

For consistent evaluations across a variety of historic dams and archaeological dam sites, the study used National Register of Historic Places (NRHP) criteria when analyzing and classifying different properties. 'Dams' are defined "as human-made barriers built across a river or other drainageway to obstruct or redirect the flow of water". The Vollbrecht Dam Site is a member of the 'resource category' called 'archaeological dam sites' that was constructed within the 1850-1941 time frame set forth by the evaluation project. The study defined "archaeological dam properties...as the ruins of water impounding structures more than 75 years old that have lost their material integrity to the point that they cannot function as originally intended". The Vollbrecht Dam Site fits this criteria as opposed to 'historic dam structures' that "are water impounding constructs that are functioning, or could function with limited repairs". As such, its 'significance' is defined by its integrity' in NRHP terms, and the Vollbrecht Dam Site might be considered both as a site on its own or as a component of a "site complex". In broader terms, the dam might also be identified as part of a technological system of similar and related sites characterized by their historic purpose within the

"dynamic landscape" of the Crow River in Hanover. To clarify, the remnants of the third dam constructed by the Vollbrecht Brothers still exists in Hanover, as does an 1885 'Pratt through truss' iron bridge now used as a pedestrian path across the Crow River. Constructed by the Morse Bridge Company of Youngstown, Ohio, this bridge was placed on the NRHP in 1979⁵ (Arnott et al. 2013, 105; Coons 2016, 13-17; *Minneapolis Tribune* 1887).

Within the framework set forth in the 2013 dams survey, there are three property types of dams in Minnesota, and those are "Logging Dams, Mill Dams, and WPA Dams". The Vollbrecht Dam Site is a logging dam because it was designed to create a pool of water on its upriver side to collect logs for processing at the first Vollbrecht Mill. It must be noted that the dam did not divert water to operate the first Vollbrecht Brother's mill as a power source. The Vollbrecht Dam Site is "a sturdier type of timber crib dam...with substantial horizontal [longitudinal] log structures filled with stone and earth for mass and water resistance, and pinned to the stream or riverbed with pilings or iron rods...[and] in some versions the upstream sides of the dams were covered with plank sheathing embedded in the riverbed or even with brush or earth". As a timber crib dam, the structure required more planning to produce and additional engineering skill to build due to the nature of the structures designed to contain rocks, sand, and gravel. However, in monetary terms, the Vollbrecht Dam was inexpensive to fabricate due to the availability of primarily free materials. Timber dams depended on the constant seepage of rocks, sand, and gravel through the layers of timbers and brush to further settle and embed the structure to uneven riverbeds, and the Vollbrecht Dam continues to maintain these attributes (Arnott et al. 2013, 54-56, 105).

Conclusions

Vollbrecht Dam Site (21-WR-244, 21-HE-590)

The Minnesota Office of the State Archaeologist's (OSA) archaeological site records and the State Historic Preservation Office's (SHPO) Minnesota Historic Dams Site Database contain 34 archaeological dam sites with alpha-numeric designations.⁶ Four of these sites, the Meeker Island Lock and Dam Site (21-RA-51, 21-HE-348) in Ramsey and Hennepin Counties, the Sauk Rapids Dam Complex (21-BN-22) in Benton County, the Brightsdale Lower Dam (21-FL-151) in Fillmore County, and an unnamed site in Lake County (21-LA-573) are not comparable to the Vollbrecht Dam Site. Three of these sites are primarily comprised of concrete components and were constructed in the early to mid-20th Century; one was a crib dam filled with granite, but no components survive.

⁵This later crib dam comprised of timber and rock was constructed by the Vollbrecht Brothers and was part of the Hanover Roller Mill, Dam and Raceway complex. According to the DNR, it was later augmented with concrete. The iron bridge replaced the Vollbrecht Mills bridge as the main Crow River crossing at what would become Hanover. It is unknown if the wooden bridge designed and constructed by the Vollbrecht Brothers in 1873-1874 was removed at this time, or remained in place for pedestrians. A Spring 1893 reference to a serious flood of the Crow River reported that "the mill and bridge at Hanover have been swept away" and this claim supports the supposition that the old wooden bridge was destroyed at this time since the Pratt iron truss bridge still stands. The toppling of another mill into the Crow at this time is erroneous, although a building associated with the mill may be been washed away (Coons 2022, 28; *St. Paul Daily Globe* 1893).

⁶In addition to the 34 dam sites in state records, there are dozens of 'alpha' sites throughout Minnesota. Alpha sites do not carry the weight of alpha-numeric archaeological sites; often times they represent sites that may have been extensively disturbed or destroyed, but evidence both historical and archaeological indicate that a site was in that location.

The remaining 30 sites in construction, function, and setting bear some resemblance to the possible original condition of the Vollbrecht Dam Site. However, from information contained in the site records, 12 dam sites contained enough surviving archaeological evidence to indicate they were constructed with the same materials and with similar attributes as the Vollbrecht Dam Site. Of these 12 dams, only the Burntside Dam #3 (21-SL-554) in St Louis County could function as a dam at the time of its documentation in 1985 like the Vollbrecht Dam Site still does on its north side. Burntside Dam #3 is described as "Deteriorated logging dam, some original stringer⁷ and rock work remain. Dam is still functional". The other 11 dams also have some surviving timbers as well as stone and often earthenworks⁸. However, six dam sites have *in situ* timbers or planks in large enough numbers to extrapolate the possible look of the dam. Two of these sites, the Tamarack Logging Dam (21-PN-96) and Lizzie Creek Logging Dam 1 (21-CA-756), have sluice timbers that resemble the eroded thin ends of the top layers of transverse timbers of the Vollbrecht Dam Site. The designs of these three dams are not similar, but the attributes found in each site are comparable. Temporally, the earliest construction date for the 12 dams similar to the Vollbrecht Dam Site is broadly determined to be the 1880s. Other dams date to the 1890s, and the rest are early to mid-20th Century structures (MN OSA 1985e, 2000, 2004a-b, 2013a, 2013d, 2023, 2024).

The Vollbrecht Dam Site, determined through Minnesota State Archaeological records, is the best preserved and oldest known post-contact archaeological timber crib dam site in Minnesota. With this site's status as a unique maritime archaeological site now established, it is necessary to determine its placement in the context of Minnesota's Maritime History. Widely used evaluation guidelines for this type of analysis are the significance criteria developed for NRHP nominations. This site would not be considered for the NRHP under its Criterion A because it is not "associated with an identified event or broad patterns of events that have made a significant contribution to the history of the United States, the state of Minnesota, or a local community". Initially, it would seem that the Vollbrecht Dam Site could be considered for the NRHP under Criterion B. because the site is "associated with the life of a person significant in the past, if they were designed, built, or managed by an individual significant in the relevant history...and retain enough of the historic dam elements and setting that it would be recognizable to the historic person." MHM contends the multiple bridges designed and constructed by Jacob and William that allowed for transportation over the Crow River between Wright and Hennepin Counties define them as significant individuals. However, this guideline further stipulates that the site must "be the property most relevant to their productive career", and that distinction may belong to the Hanover Roller Mill. But, since the mill no longer exists, the Vollbrecht Dam Site is the most significant surviving property constructed by Jacob and William. This aspect of Criterion B may - or may not - apply to the Vollbrecht Brothers (Arnott et al. 2013, 109).

⁷The term 'stringer' is synonymous with 'longitudinal timbers' since stringers are longitudinal beams that add stability to the inner hulls of boats and ships. MHM determined using the term 'longitudinal timber' in the context of dam construction and description is more accurate than using the term stringer since it is a worked plank or formed metal beam used in vessel construction.

⁸The 12 dams similar to the Vollbrecht Dam Site are the Lizzie Creek Logging Dam 1 (21-CA-756), Lizzie Creek Logging Dam 2 (21-CA-757), and Lizzie Creek Logging Dam 3 (21-CA-758) in Cass County, Devilstrack Dam (21-CK-208) and the dam in the Swamp River Logging Complex (21-CK-373) in Cook County, St. Croix Dam (21-LA-112) and Cloquet Lake Tressle-Dam (21-LA-558) in Lake County,, Tamarack LoggingDam (21-PN-96) in Pine County, the dam at Grady's Bridge (21-SL-492), Burntside Dam #2 (21-SL-551), Burntside Dam #3 (21-SL-554), and Aiden Lake Dam (21-SL-1191) in St. Louis County (MN OSA 1985a-e, 1998, 2012a-b, 2013a-d).

Criterion C is more likely to be an evaluation guideline that may distinguish the Vollbrecht Dam Site as a significant archaeological property. Criterion C stipulates that the "design [of the archaeological site] embodies the distinctive characteristics of a type, period or method of construction, or is the work of a master...especially if it is a rare surviving example or was the first of a type; if it illustrates an engineering solution to a unique problem; or if it was designed by a notable designer...[and] must retain their place at the intersection of a hydrological and technological system, and preserve the components that clearly communicate the workings of the water-impounding complex". The last guideline, Criterion D, "requires that an archaeological property...have the potential to yield significant information important in national, state, or local history. Significant information could fill gaps in our understanding of dam site selection, dam construction techniques or use, local economic development, material use, undocumented ecological effects, or technological change" (Arnott et al. 2013, 109-110).

NRHP considerations aside, the Vollbrecht Dam Site is a significant archaeological site that is intrinsically valuable due to its unlikely 170 year survival in the dynamic and flood-prone Crow River. The dam site's extensive *in situ* timber components, at least 12 layers thick at its northern end, have retained their integrity as archaeological attributes of a timber crib dam. As a built timber structure designed to affect river flow and pool water for on-river log 'storage', it remains effective in that role. The dam is continually eroding, and mitigation using sandbags or other approved means, would slow that deterioration. William and Jacob Vollbrecht arrived in Minnesota Territory with the skills of a woodworker, miller, blacksmith, and mechanic. Together the brothers utilized their abilities to construct the oldest and best preserved post-contact archaeological dam site on a Minnesota river. Our shared Maritime History has been greatly enhanced by their work, not only in constructing their dam, but their skill in building bridges. Those structures allowed for efficient movement of Minnesotans and their goods or possessions, significantly contributing to our economic history. The development of Wright and Hennepin Counties along the Crow River can be directly linked to the Vollbrecht Brothers and others like them, and their stories provide context to the Maritime History of Minnesota.

Appendix A Other Crow River Dams

The Crow River has three forks - the North, Middle, and South Fork. Historically, dams were constructed on all the forks from the mid-19th into the early 20th Centuries. Presented here is a brief synopsis of the well-known dams constructed on the Crow River that can be shown through photographic images.

Hanover - Third Hanover Dam, Crow River



Early 1900s
(Hanover Historical Society, courtesy Mary Coons)



1947 (Above), 1960 (Below)
(John R. Borchert Map Library)



St. Michael - Berning's Mill and Dam, Crow River



Watertown Dam, South Fork Crow River



Paynesville Dam - North Fork Crow River



New London Dam - North Fork Crow River



The dam before (2010) and after (2011)
reconstruction.
(MN Department of Natural resources)



Hutchinson Dam - North Fork Crow River



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